



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC476

Endangered and Threatened Species; Take of Anadromous Fish

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Receipt of two permit applications and one permit modification request for scientific research and enhancement.

SUMMARY: Notice is hereby given that NMFS has received two scientific research and enhancement permit applications and one permit modification request relating to anadromous species listed under the Endangered Species Act (ESA). The proposed research activities are intended to increase knowledge of the species and to help guide management and conservation efforts. The applications and related documents may be viewed online at:

https://apps.nmfs.noaa.gov/preview/preview_open_for_comment.cfm. These documents are also available upon written request or by appointment by contacting NMFS by phone (916) 930-3706 or fax (916) 930 3629.

DATES: Written comments on the permit applications or modification request must be received at the appropriate address or fax number (see ADDRESSES) no later than 5 p.m. Pacific standard time on [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Written comments on the applications or modification request should be submitted to the Protected Resources Division, NMFS, 650 Capitol Mall, Room 5-100,

Sacramento, CA 95814. Comments may also be submitted via fax to (916) 930-3629 or by email to FRNpermits.SR@noaa.gov.

FOR FURTHER INFORMATION CONTACT: Amanda Cranford, Sacramento, CA (ph.: 916-930-3706, e-mail.: Amanda.Cranford@noaa.gov).

SUPPLEMENTARY INFORMATION:

Species Covered in This Notice

This notice is relevant to federally threatened California Central Valley steelhead (*Oncorhynchus mykiss*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), endangered Sacramento River winter-run Chinook salmon (*O. tshawytscha*), and the threatened southern distinct population segment of North American (SDPS) green sturgeon (*Acipenser medirostris*).

Authority

Scientific research permits are issued in accordance with section 10(a) (1) (A) of the ESA of 1973 (16 U.S.C. 1531-1543) and regulations governing listed fish and wildlife permits (50 CFR Parts 222-226). NMFS issues permits based on findings that such permits: (1) are applied for in good faith; (2) if granted and exercised, would not operate to the disadvantage of the listed species which are the subject of the permits; and (3) are consistent with the purposes and policies set forth in section 2 of the ESA. The authority to take listed species is subject to conditions set forth in the permits.

Anyone requesting a hearing on the applications or permit modification request listed in this notice should set out the specific reasons why a hearing on the application(s) would be appropriate (see ADDRESSES). Such hearings are held at the discretion of the Assistant Administrator for Fisheries, NMFS.

Applications Received

Permit 17299

The NMFS Southwest Fisheries Science Center, Fisheries Ecology Division (SWFSC) is requesting a 5-year scientific research and enhancement permit to take adult, smolt and juvenile CCV steelhead, SR winter-run Chinook salmon, CV spring-run Chinook salmon, and adult and juvenile SDPS green sturgeon associated with research activities in the Central Valley, California. Incidental mortality of ESA-listed species is not expected to exceed two percent of the total take for Permit 17299. The overall goal of this project is to provide critical information in support of conservation and management of California's salmon stocks. The SWFSC will conduct comparative studies on salmonid ecology across all Central Valley habitats (streams, rivers and Delta) to increase our knowledge of California's Chinook salmon and steelhead life histories.

The studies proposed for Permit 17299 will follow three directions: 1) telemetry studies to assess river habitat use, behavior, and survival, 2) predator impacts on salmon, and 3) physiological measurements of aerobic scope across stocks. The results of these studies will be integrated into life-cycle modeling efforts at the SWFSC and provide guidance to NMFS, Southwest Region and other Central Valley agencies for their resource management efforts.

In situations where the SWFSC are unable to rely on collaborators to capture fish through rotary screw trapping, collection methods will include fyke nets, backpack electrofishing, beach seining, tangle netting, DIDSON observations, and hook and line. Handling will typically involve sedation of juveniles (MS-222), measurements, tissue sampling (fin clips and scales from most, stomach lavage [subset] and tagging [PIT tags, acoustic tags]) followed by release of live fish. Another group of hatchery produced salmonids will be tested in the laboratory to measure aerobic scope under a range of temperature and flow combinations. A small subset of those

hatchery produced fish will be sacrificed to collect otoliths for age and growth measurements, organ tissue for isotope analysis, biochemical and genomic expression assays, and tag effects/retention studies.

Permit 17777

David Vogel, Senior Scientist with Natural Resource Scientists, Inc. (NRSI) is requesting a 2-year scientific research and enhancement permit to take entrained juvenile CCV steelhead, SR winter-run Chinook salmon, CV spring-run Chinook salmon, and SDPS green sturgeon associated with research activities at the Sycamore diversion site on the middle Sacramento River, Colusa County, California.

This research is part of an ongoing effort to develop criteria to prioritize fish screening projects on the Sacramento River and experiment with devices to reduce fish entrainment into unscreened diversions. The site was selected by state and federal agencies. Sampling will involve the use of fyke nets positioned at the diversion outfall in the irrigation canal. The diversion has been screened with two retractable screens. The UC-Davis Hydraulics Laboratory has designed an alternative device to reduce fish entrainment for placement over the two riverine intakes in lieu of the two fish screens. Fish sampling will occur every day with the behavioral devices in place and removed on alternating days throughout the irrigation season. The effectiveness of the behavioral device will be determined by comparing the numbers of fish entrained each day with the devices in place and removed.

Fish captured on the outfall side of the pumped diversions are not expected to be alive or salvageable since fish will be mortally injured by the pumps, lethally stressed in pressurized pipes and warm water, or otherwise lost to the water distribution systems. Dead or moribund fish will be identified to species, enumerated, measured, and the carcasses put back into the

canals at the sampling site. To the extent practicable, any captured live ESA-listed species will be immediately returned to the river. This study will also incorporate an ongoing process to correlate fish entrainment with physical, hydraulic, and habitat variables at diversion sites. Results from this research should assist in providing the technical basis to determine the effectiveness of the behavioral devices, as well as developing criteria for ranking and prioritizing diversions for future screening opportunities.

Modification Request Received

Permit 16543-M1

Permit 16543 was issued to the California Department of Water Resources (CDWR) on October 2, 2012 for take of adult CCV steelhead, SR winter-run Chinook salmon, CV spring-run Chinook salmon, and adult, subadult, and juvenile SDPS green sturgeon associated with research activities in the Sacramento-San Joaquin Delta, California.

This project examines predation by introduced fishes and native resident fishes on migrating native fishes across a variety of habitats and migration corridors in the northern Sacramento-San Joaquin Delta. Results provide information on spatial and environmental patterns of predation; critical information for guiding future restoration projects on conditions likely to support or discourage higher predation rates on endangered and native fishes. Sampling is conducted April, June and December in the Sacramento River above Rio Vista, Georgiana, Steamboat, Miner, and Cache sloughs, and the Sacramento Deep Water Ship Channel. Predators are sampled using trammel nets, with the goal of genetically analyzing gut contents for the DNA of various prey items. While listed species are not the target of the sampling program, incidental take may occur and will provide valuable information on abundance, habitat use, and migration timing.

CDWR is requesting a modification of Permit 16543. The proposed changes include; an additional monitoring site at Liberty Island in the Sacramento-San Joaquin Delta and an increase in juvenile, sub-adult, and adult SDPS green sturgeon take across all locations. Incidental mortality estimates will remain at zero.

The monitoring carried out under Permit 16543 represents the initial field effort for a brand new project. The take estimates for SDPS green sturgeon for Permit 16543 was purely an estimate based on the expectation that SDPS green sturgeon densities are very low in the region. However, preliminary monitoring attempts by CDWR were met with higher than anticipated catches of SDPS green sturgeon. Given the paucity of information on the location and behavior of SDPS green sturgeon in the Delta, continued sampling will provide new data on the movements and locations of SDPS green sturgeon and further assist NMFS and other agencies in their management of this species.

Dated: January 29, 2013.

Angela Somma, Chief, Endangered Species Division, Office of Protected Resources,
National Marine Fisheries Service.

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